computing mobility device acceleration of the mobility device based at least on a speed of the plurality of wheels; and

computing at least one inertial sensor acceleration of at least one inertial sensor mounted upon the mobility device based at least on sensor data from the at least one inertial sensor;

computing a difference between the mobility device acceleration and the inertial sensor acceleration;

comparing, forming a comparison, the difference to a pre-selected threshold; and

commanding the clusters of wheels and a caster wheel assembly to ground based at least on the comparison.

14. The method for moving the mobility device as in claim **12** further comprising:

providing, by field weakening, bursts of power to motors associated with the clusters of wheels.

15. The method for moving the mobility device as in claim **12** further comprising:

estimating a center of gravity of the mobility device including:

(a) measuring data including a pitch angle required to maintain the balance of the mobility device at a cluster pre-selected position of the clusters of wheels and a seat pre-selected position of the seat;

(b) moving the mobility device to a plurality of points;

(c) repeating step (a) at each of the plurality of points;

(d) verifying that the measured data fall within pre-selected limits; and

(e) generating a set of calibration coefficients to establish the center of gravity during operation of the mobility device, the set of calibration coefficients based at least on the verified measured data.

16. The method for moving the mobility device as in claim **15** further comprising:

maintaining stability of the mobility device; and

automatically decelerating forward motion and accelerating backward motion under pre-selected circumstances, the pre-selected circumstances being based on the pitch angle of the mobility device and the center of gravity of the mobility device.

17. The method for moving the mobility device as in claim **15** further comprising:

moving the clusters of wheels by redundant motors;

sensing sensor data from the redundant motors and the clusters of wheels by redundant sensors;

selecting information based on agreement of the sensor data among the redundant sensors; and

commanding the mobility device based at least on the selected information.

18. The method for moving the mobility device as in claim **17** further comprising:

sensing substantially similar characteristics of the mobility device by the redundant sensors.

19. The method for moving the mobility device as in claim **12** further comprising:

limiting, by user-configurable drive options, the speed and a mobility device acceleration based on pre-selected circumstances.

20. The method for moving the mobility device as in claim **12** further comprising:

modifying at least one speed range for the mobility device by a thumbwheel operably coupled with a user-control device.

21. The method for moving the mobility device as in claim **12** further comprising:

receiving a second indication that the mobility device is encountering a ramp between the ground and a vehicle;

directing the clusters of wheels to maintain a first contact with the ground based on the encountering the ramp;

changing an orientation of the clusters of wheels based on the encountering the ramp and according to at least one value required to maintain the balance of the mobility device based on a position of the clusters of wheels on the ramp;

dynamically adjusting a seat distance between the seat and the clusters of wheels based on the encountering the ramp to prevent a second contact between the seat and the clusters of wheels while maintaining the seat as close to the ground as possible while on the ramp.

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